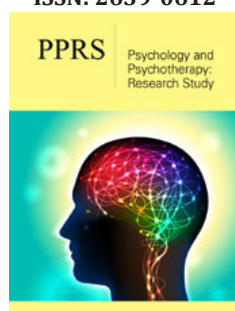


Novel Psychotherapeutic Approach in the Treatment of Recurrences of Takotsubo Syndrome

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Abstract

Background: Takotsubo Syndrome (TTS) is an acute coronary syndrome, resembling acute myocardial infarction, due to reversible microvascular constriction producing transient myocardial dysfunction. It mainly affects post-menopausal women after stress, trauma, or mourning. TTS may be lethal and recurrent despite complete medical therapy. For the first time, we propose a psychotherapeutic approach to prevent recurrences of TTS.

Methods: Patients with recurrent TTS underwent psychodynamic psychotherapy according to Mutative Psychoanalytic Process (MPP), a novel psychotherapeutic intervention aiming to induce an evolutionary change in the patient's mental processes. We report an example case.

Result: In this TTS patient treated by PMP, the model allowed an early identification of the personality structure, as neurotic character, with consequent representation in the therapist's mind of the distress and defensive mechanisms of the patient. The therapist eluded the patient's trial to establish a relationship model well known to her, thus producing an effective evolutionary change in the patient's mind. The patient concluded a successful cycle of psychotherapeutic treatments and has remained free of cardiac symptoms since.

Conclusion: This initial psychotherapeutic experience confirms the psychodynamic genesis of cardiac pathology and opens a new frontier for studies in this area. Which personality profile is more likely associated with TTS, if it can predispose to such cardiac syndrome, and if MPP is the ideal treatment for these patients remains to be demonstrated in a larger study population.

Keywords: Tako-tsubo syndrome; Psychotherapy

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Introduction

Although it is known how much the mind can influence the body and how psychological distress can generate organic alterations, no pathology has ever made this link as evident as Takotsubo Syndrome (TTS). It is a reversible cardiac dysfunction, generated by a reversible constriction of the coronary microcirculation, which mainly affects women in post-menopausal age after intense acute or overlapping psychic distress [1]. The syndrome, mostly benign but burdened by a mortality similar to that of myocardial infarction, can recur despite maximal medical therapy [2]. The annual recurrence rate of TTS is about 1.5% and reaches almost 5% at 6 years [3]. To date, no pharmacological treatment has been shown to reduce the rate of relapses, and TTS patients with recurrences had a significantly higher 30-day cardiovascular mortality compared to those without recurrence (21.4 % vs 3.8 %, $p = 0.001$), with a 5.9-fold higher 30-day cardiovascular mortality [4]. Numerous observations have also reported a high prevalence of psychiatric or neurological disorders in patients with Takotsubo syndrome [5-7].

The association between Takotsubo syndrome and psychological disorders points to the possibility of reducing the rate of recurrence through the treatment of these disorders. Still, to date, no study supports the effectiveness of psychotherapeutic intervention in this area. We report a first clinical case in which a patient with relapsing TTS underwent a short psychotherapeutic course using the technique of the Mutative Psychoanalytic Process (MPP) [8]. MPP is a psychoanalytically oriented face-to-face psychotherapeutic method with weekly frequency. The theoretical model that underlies it integrates the contributions of the psychoanalytic theory of object relations, with particular reference to the contribution on active technique by Sándor Ferenczi [9]. In the MPP method, the creation of the transference neurosis is not encouraged. Still, from the first therapeutic exchanges, the patient is urged to become aware of his hitherto preconscious mode of relation, thus comparing it with the status he attributes to the object in the here and now. Once the investigative phase is over, the transformative psychoanalytic process begins, which has already started within the patient-psychotherapist relationship.

This therapeutic action allows a rapid intervention and changes in the patient's psychic functioning. Therefore, the therapist interprets their countertransference experiences as hypothetical deductions concerning the patient's relational past. By reading them in a resistance key, and at the same time making himself missing as the object of projections of unconscious fantasies, the therapist proposes a different relational experience compared to the old and dysfunctional mental representations, helping the patient to mourn them and to create new, less partial and more self-protective ones, since they integrate the awareness that any perception can be interpreted not in a totalizing and univocal way, but can take on other and different meanings that leave room for the representative richness of reality. The MPP also values the moment of crisis, understanding it, rather than as a catastrophic event, as an evolutionary opportunity for the patient, helping the transition from a fixed and defensive mode of thought to a more flexible and elaborative one. Finally, the therapeutic indication of MPP is structured and adapted in response to each personality organization (neurotic, borderline, psychotic) characterized by specific object representations, anxieties, conflicts, defences, and resistances. In the following text, it will be a first experience in which the psychotherapist, Leonarda Galiuto, who reports on it, is also a cardiologist.

Clinical Case

The patient is a beautiful, 54-year-old, tall, thin, well-groomed, and well-dressed woman. She says she found my name and reference on the Internet, where she had searched for an expert in TTS, a syndrome she had been affected by twice: she saw my name as cardiologist, syndrome expert, and psychotherapist. She wants to understand the causes to prevent any recurrences and also to convince her family environment that she has a real pathology and not a "simulation". This immediately makes me speculate that the patient was not believed in the past or that, at least, she wanted me to think this, accusing the environment of not taking her condition

seriously. In both hypotheses, however, the patient gave evidence of a lack of assertiveness, which is responsible for the position she has in her family environment, and therefore of a clear narcissistic insecurity and an uncertain phallic structure.

The cardiological evaluation was conducted in an orderly and essential manner. She quickly understood the syndrome's pathogenesis; it was easy for her to understand the correlations between the heart and mind, and she was immediately available to investigate and solve any psychic problems. She fears that the syndrome will come back again, for the third time. Given the double specialization in cardiology and psychoanalytic psychotherapy, I offered her the possibility of starting a psychotherapeutic path and possibly being followed by me. The patient, despite the distance from her residence to my office, immediately showed herself eager to be treated, so I gave her the first appointment for the first psychotherapeutic visit.

The immediacy with which she accepted the proposal of treatment does not arouse any seduction in me; that is to say, I didn't fantasize that she wanted to use me to prove to her family that she is sick. Instead, I feel somewhat impulsive, unreflective, and almost childish in immediately accepting the need to put herself in my hands to take care of her body and mind. Therefore, although I had the impression that the patient had an evolved personality, I nevertheless hypothesized that it may be an upper limit state, given the evident pathology of narcissism and the modality of relationship with the object. This appears to be set up according to the criterion of splitting images, so everything is divided between two extremes -full/empty, black/white, good/bad. The relationship with oneself and with others is characterized by opposing and disjointed experiences and descriptions, which imply sudden changes from one pole to the other. Now the patient thought that the origin of her discomfort had to be attributed to her mother, to describe her shortly afterwards as benevolent, and significant for her subtlety.

First session

The patient arrived alone, in advance, at my psychotherapy office. Although I perceived her slight anxiety, she seemed to simplify everything; she was confident and eager to start the journey with me. She was elegant in her dress, adequate in her manners, and correct in her speech. I explain to her that we will always have to evaluate together the impact on her of the change of setting (from cardiology to psychotherapy) and that we will do it from moment to moment, by sharing the sensations we will have. The first change certainly concerns my mental structure, which had to be markedly flexible. Thinking of completely abandoning the rational mind of the cardiologist, who explores signs and symptoms to make a "textbook" diagnosis and propose a treatment adhering to international scientific protocols and guidelines, to assume the structure of the psychotherapist would be unrealistic, to say the least. Therefore, I must elaborate on the need to take a position that integrates my dual role, accepting that in the patient's mind and mine, the two mental representations of the cardiologist and the psychotherapist can overlap. This work of integrating the images has already constituted in itself a therapeutic intervention centred

on the mechanism of splitting, operating in the patient's mind: it has allowed us to build an adequate setting, moving between transference and countertransference, moving from a rational position to search for sensations and emotions of our own and the patient, creating a third space, which is that of the relationship where true transformation can take place. In abandoning the "investigative" search for signs and symptoms of the disease of the body and in preparing myself to listen to the story, but above all to the sensations, I notice that the patient immediately puts herself at ease in the setting, relating to me as a psychoanalyst. This immediate adaptability makes me think again of a fairly evolved way of patient functioning.

So, I asked her what her "problem" was, and she replied curtly and decisively: "My problem is my mother". And she immediately added, "I don't want to say that my mother is bad, on the contrary, I owe her a lot." I therefore asked to clarify the meaning of your statement, which seems to me to be full of underlying meanings. Thus began a somewhat disordered, but compelling, story of the genesis of her psychic illness, which had started at the age of 15 with the perception of being "oppressed" by her mother and by the constant judgments of the country in which she lived. Her mother, a self-made woman with great entrepreneurial intuition, started and managed a successful business herself. In her teenage daughter, the only girl of three children, she inculcated the idea that other people talk and observe her for her money and behaviour in the city. So, the patient led an adolescent "under strict supervision" and always had to worry about what people said; she could not freely associate with her peers, except when she met a boy who was to her mother's liking and married him quickly. It soon emerges that the reason this boy was so liked by her mother was related to his being easily manipulated and the fact that he was a "graduate". He finds it convenient to go and manage one of the family shops, where she collaborates as a saleswoman. The patient became pregnant, and a girl was born, but immediately after giving birth, she fell into depression, suffered from bulimia, gained a lot of weight, and had no menstrual cycle for five years. A psychiatrist prescribed fluoxetine, which made her sick, and she decided not to take it anymore. At that time, she embarked on a path with a psychotherapist who practiced hypnosis on her, but she was frightened because he induced her to speak with the voice of a "six-year-old girl beaten by the teacher".

At this point in her narrative, the patient must clarify: "I seem malleable, but I'm not." Nevertheless, she referenced how much she had been conditioned by what others say about her as a wealthy woman. The oscillation between an attitude of autonomy of judgment, similar to the one she had shown with the previous psychotherapist who wanted to subject her to hypnosis, and one of dependence on the way to life transmitted to her by her mother, led me to think of a difficulty in taking a stable phallic position in the course of her psychic development. Further proof of the presence in her of pregenital aspects, not significantly evolved, is given by the fact that, from time to time, her story becomes "confused" and I had to intervene to put order in facts; sometimes it bordered on addressing me on a first-name basis, as if losing sight of my role. My countertransference reaction was maternal: I felt tenderness

in listening to her, as if she were a child who desperately tries to rebel, to exist, who is not considered because she has everything but has nothing. This confirms the patient's coexistence of evolved personality aspects in the face of others, much less evolved. She got excited and started crying when I gave her back this emotion. On leaving my studio, she added that she can no longer have a good relationship with men, and again, she called me "you" in asking me if she would be cured. I reassured her I could do it with a child, and she left happy. They's crying reaction shows that we are dealing with a patient with critical emotional deficiencies. Therefore, the initial diagnostic hypothesis appeared to be further confirmed: a woman with an evolved psychic functioning, precisely a neurosis of the character, that is, an upper limit state with a defensive construction "as if".

It should be specified that the MPP refers to the classification of Jean Bergeret, which, using meta-psychological and genetic data, gives evidence of the economic plan underlying the different personality organizations [10]. The diagnostic framing of the "character neurosis" or "upper limit state" refers to a personality functioning characterized by a good adaptation to external reality, with an anaclitic mode of object relationship, which requires constant support from the other to heal the fragile narcissism. Dominant in these patients is the avoidance of conflicts as a means of avoiding excessive emotional disturbances. The regulating action of the superego, which is also linked to reality, does not balance the overinvestment of the ego ideal, which becomes the organizing instance of the psychic apparatus. The neurosis of character, therefore, although close to a triangular relational and object modality, remains blocked in a dyadic position. Consequently, the degree of emotional maturation of the limit states will depend on the degree of impairment of narcissism and the ability to construct complete object relations. According to Jean Bergeret [10], the first affective disorganizing trauma of the emotional evolution of the upper limit states would be due to a distancing of the father from the Oedipal triangulation. In this regard, in Elena's treatment, the therapist assumed a paternal function, and the patient's ability to maintain the relationship with a doctor with a dual role without confusion favoured an evolutionary triangulation and a rapid and stable resolution of the therapeutic process. The agreements for structuring the setting were to meet for four sessions, one a week, at the end of which we would decide together whether or not to continue the therapy, and if necessary, with successive blocks of eight sessions, as granted by the national health system.

Second session

The patient arrived on time and resumed her narration, slipping back into the "you" in addressing me; however, I am convinced that it is only a cultural problem: for the rest, he knew how to respect my role and its limits. I investigated the moments triggering the TTS: she dated the first episode back to 2010, on the occasion of the death in a car accident of one of her two brothers. The symptoms, however, did not begin immediately but arose about a month after the accident. The second episode, in 2014, took place after a verbal aggression that her mother made to her in public. I investigated

the male figures in her life, and she tells me about a father, now deceased, with maternal characteristics, completely subjugated by his mother on an emotional level, a patient bedridden in the last ten years of his life.

The patient's husband behaved kindly towards her, but he lied when he told her he had graduated. The discovery of this first lie, immediately after the birth of her first daughter, had precipitated her depressive state, accompanied by bulimia, which was so severe that she could not even get out of bed. She lived with a constant feeling of weight in her stomach that passed only after the separation from her husband. I then discovered that she found the strength to separate only after discovering a betrayal by her husband, a further lie. After the separation, she felt much better: the feeling of weight in her stomach passed, she stopped smoking the two packs of cigarettes a day, finding the necessary determination after someone had told her that she gave off a bad cigarette smell; He also controlled the urge to overeat, lost weight, got back in shape. She began an independent life, taking care of her two daughters, but without being able to establish a relationship with a man for fear of reliving that feeling of loneliness in the copy she had felt during the marriage, and that she feared very much.

In the restitution, I valued the strength that Elena had shown in finding the determination to separate herself and in "curing" herself of her addiction to food and smoking. My intervention had the purpose of moving her to a third position consisting of a phallic representation of herself, since the patient had not been able to constitute a valid support for the development of her identity. Indeed, her primary relationships had prevented her from this evolutionary transition. The mother embodied an omnipotent and castrating phallus, therefore dangerous. Due to his wife's fault, the father seemed to have abdicated entirely. The confrontation with the image of a different Elena, capable of enhancing her volitional drives, took place in the first instance in the mind of the psychotherapist and could then be shared with the patient. In this way, the therapist, with her decisive set-up, could show herself as an identifying object for the patient, possibly formulating a decision or activating a change in the affirmation of her choice.

Third session

The patient began by saying that after the last interview, she had felt unwell: "It's one thing to know what's wrong for yourself, it's another to hear it." I reassured her, pointing out that hers was a predictable reaction, because until then she had lived in the defensive conviction that she was a fragile person to avoid the conflicts necessary to grow. On the other hand, her initial need to prove that she was a sick woman also went in this same direction. However, I decided to do an in-depth analysis and discovered that her malaise stems from having become aware that, despite her attempts, she had not managed to react to the mother; therefore, she feared that she would adhere to the negative image of her mother in her relationship with her daughters and that she would not be a good mother herself. I reassured her that she was a profoundly different person from her mother and that her questioning herself is an effective way to avoid harm to her daughters, something that

her mother would never have thought of; However, I point out that her lingering on self-reproaches inhibited her grittiest and assertive reactions. So, she began to talk to me about her daughters, as if she wanted to emphasize not only her shortcomings as a mother, but also the eldest's myth of the good father who took care of her depression. Until she was forced to see the lying behaviour of her father, who had hidden from her that he was expecting a child from her second partner, she is a strong-willed and independent girl, she lives alone in Bologna, has a direct relationship with her grandmother and treats her in the same way, as a dominatrix. She attributed this behaviour of her daughter to the fact that since she was a child, she has seen her mood severely depressed, perceiving her as incapable and her father as good. The second daughter had a better and more emotional relationship with her; she lived in Rome alone and was fine. At the end of the interview, she returned to underline the suffering she had to experience in constantly having to show, appear without ever being, falling back into a sort of self-pity. The progress of this session shows the processualism of the psychotherapeutic course, made up of successive progressive and regressive movements, reflecting the dynamics between drives and defences, on which, in the MPP, the psychotherapist intervenes to elaborate it.

Fourth session

The patient tells me that she felt better and had started to "let go", that is, not to be hurt for anything and not to take it out on the things that happen that are not as she would like. She therefore begins to become autonomous from the environment in the affirmation of self-esteem. She is more capable of dealing with his phallic emptiness, at the base of which there seemed to be a constant perception of being able to receive love and attention only on condition that he denies his needs to satisfy those of others. This interpretation shared with the patient led her to elaborate on the myth of Atlanta, a myth evocative of the difficulty in achieving a balance between dependence and autonomy. The heroine's grandiose deeds are moved by a drive to satisfy the environmental demands (of the father in particular), in a conformist and "falsely autonomous" adaptation to reality, since it denies the needs of dependence and authentic subjective enhancement of the Self. The myth tells that Atlanta was abandoned because the father wanted a son. She was cared for by a bear, adopted by hunters, and became an unbeatable hunter. Finally recognized by her father thanks to her skills, Atlanta tried to oppose the obligation to marry imposed by her father. She decided that she would marry only those who beat her in the race, which Melanion succeeded in doing with a trap hatched with the complicity of Aphrodite. A more phallic-assertive mental set-up that, of course, needed time before it could be considered well structured. Towards the end of the fourth session, the patient said she strongly needs to continue our meetings.

From the fifth to the eleventh session

In the following six interviews, we delved into aspects related to her identity as a person, which had been undervalued since childhood, and to her female image, which has even been disregarded. The patient began to carve out her own spaces of

independence, had a more serene relationship with her body, accepted wearing skirts even if she had never liked her legs, and no longer clashed with her daughters. Talking about her desires for personal fulfilment and fantasies, she said that she would have wanted to graduate. My elaboration thus focuses on his defence: considering himself incapable despite all his obvious potential. I would feel compelled to cheer her up and help, but I abstain from assuming an excessively maternal attitude, which she would not have benefited from. Therefore, I urged her to reflect on what she arouses in me, while she should be the one to believe in her abilities independently. Finally, the patient began to face the key problem of her illness: the non-rebellion against her maternal figure and her impositions, despite having the psychic strength to do so. She continued to bring episodes to therapy that seemed to endorse her state of impotence, even if in reality it was the projection of her mother's state of helplessness. The treatment appeared to be at a standstill.

I felt the need to intervene with the patient in a very decisive way, confronting her with her intention to change, otherwise hypothesizing a closure of psychotherapy. The stimulation within the therapeutic relationship of the anxiety of loss, typical of the neuroses of character, allows its integration. The patient, even if she refused to change, would have made a phallic enhancement of herself by deciding for herself in which she renounced the therapeutic bond.

From the twelfth to the fourteenth session

The patient understood that I had no intention of identifying with her projections on me. Therefore, she began to elaborate how and to what extent the mother embodies the myth of Cronus, constantly confronting her children with the impossibility of overcoming and dethroning her. A substantially fragile woman, patient's mother exercised absolute control and dominion over her and her siblings: she kept all the properties and proceeds of the company in her possession, except for dispensing "pocket money" to her children, who were adults, considering them incapable of managing the assets, but using them to manage the daily tasks indispensable to the management itself. The patient finally began to integrate the image of the mother, seeing her for what she was and re-evaluating herself no longer as powerless, but as capable of reacting and taking charge of her life. She managed to re-establish a bond with her brother and make him "open his eyes" to her mother's negative behavior and the need she had to turn her brothers against each other to dominate them. So, her brother also had the opportunity to react, rebelling against their mother. Both took control of the company's finances, emotionally detaching themselves from the image of their mother-mistress to conquer their identity as entrepreneurs.

Fifteenth and final session

The patient began the session by reiterating what she occasionally revealed: "I feel much better, and I would like to start studying Psychology to obtain a degree". Understanding the need for her successes to be valued, I did not object when he asked me to start considering the possibility of discontinuing therapy. A year

after the conclusion of psychotherapy, in the various check-ups that followed, the patient told me that she was very well and that she no longer had cardiological symptoms.

Conclusion

This paper concerns the first case of a patient with Takotsubo syndrome who was treated in recurrences through psychotherapy by applying the model of the Mutative Psychoanalytic Process (MPP). The model allowed the early identification of an organization of personality typical of character neurosis and an immediate representation of the patient's anguish and defence mechanisms in the therapist's mind. The patient's narrations of her vicissitudes and relational modalities initially allowed the psychotherapist to identify the psychic defensive operations acted out by the patient, which were mainly located on the register of splitting. In the continuation of the psychotherapeutic process, the psychotherapist gradually combined the split and extreme mental representations of her objects in the reality of life with alternative, ambivalent, and increasingly integrated mental representations, thus allowing the patient access to more mature reparative mental operations.

The therapist has avoided the patient's attempt to re-establish the relative modalities known to her and, by placing herself as a third party, has produced an effective change in the functioning of the patient's mind in an evolutionary sense, helping her to access more mature psychic defences. This initial experience of psychoanalytic therapy in patients suffering from TTS confirms the psychic genesis of organic cardiac pathology and opens the way to new studies in the field. It will be necessary to demonstrate which personality structure is most frequently associated with this syndrome and whether it can be in some way predisposing to the genesis of the pathology. A novel interpretation of the strict correlation between body and mind comes from the Human Birth Theory, elaborated by Massimo Fagioli, in which human mind, activated at birth by the light, gives rise to the annulment drive, which refuses the inanimate world, such as cold and light in particular, making the external world disappear [11,12].

Studies carried out on newborns concerning the rate of the heartbeat in the first moments of life have found a decrease in the heartbeat compared to the fetal one within the first minute after birth, with a heart rate increase in the following minutes [13]. This decrease is recorded, albeit with variations, both in term and preterm infants; both in births by natural birth and by caesarean section, and is also present in newborns with immediate or delayed umbilical cord cutting [14]. Some hypotheses have been formulated to explain the slowing of the heart rate, among them a reduction in venous return due to the transition from placental to pulmonary circulation or an activation of the parasympathetic pathway of the vagus nerve at the time of delivery. None of these hypotheses, however, is completely exhaustive at the moment. However, the effect of vagal activity on the heart could represent an interesting link between mind activation and modulation of the heartbeat rate.

Fagioli hypothesized that at birth, light hitting the retina activates the central nervous system, and the annulment drive that

arises from the newborn's mind is responsible for the absence of tone of the neuromuscular system and the reduction of the heart rate. The 'strength of the heart' resists the drive, and after a few seconds, the heart rate increases, the muscles become toned, and breathing begins [15]. In the future, a psychodynamic psychotherapeutic approach based on Fagioli's Human Birth Theory in this subset of TTS in whom the heart is affected by a reduction in the heart muscle strength as a consequence of annulment drive experienced during stressful conditions, might produce significantly preventive and therapeutic results.

A peculiar aspect of this initial experience in the treatment of TTS relapses with psychotherapy resides in the dual clinical, cardiological, and psychotherapeutic skills that have favoured the management of the patient's resistance to change, previously manipulated through exacerbations of the somatic symptom. Integrated management has emphasized the therapeutic value of psychosomatic wholeness as a protective factor. In addition, the gradual reduction in the setting of the medical indications proper to the cardiologist's role has prompted the need to integrate the emotional sphere, thus favouring a decrease in support only for the bodily datum in favor of greater psychic processing. Finally, the presence of the dual role has prompted the emergence of the patient's ability to differentiate the two structures without experiencing confusion, thus promoting the unveiling of her inherent potential for integration, further proof of subjective value previously unknown.

Although this outcome cannot be considered a "cure," the patient reports a more evolved functioning and the disappearance of recurrent cardiological symptoms. This case report suggests the opportunity to undertake case-control studies according to the scientific method of evidence-based medicine to obtain the definitive demonstration of the effectiveness of psychoanalytic intervention, as well as of different possible psychotherapeutic approaches (cognitive, cognitive-behavioural, behavioural, psychodynamic, etc.) in reducing the rate of relapses and improving the prognosis of patients who have suffered from Takotsubo syndrome.

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